A. CORTS.

RAIL GRIP.

APPLICATION FILED DEC. 18, 1908.

916,675.

Patented Mar. 30, 1909.

Fig. 1.

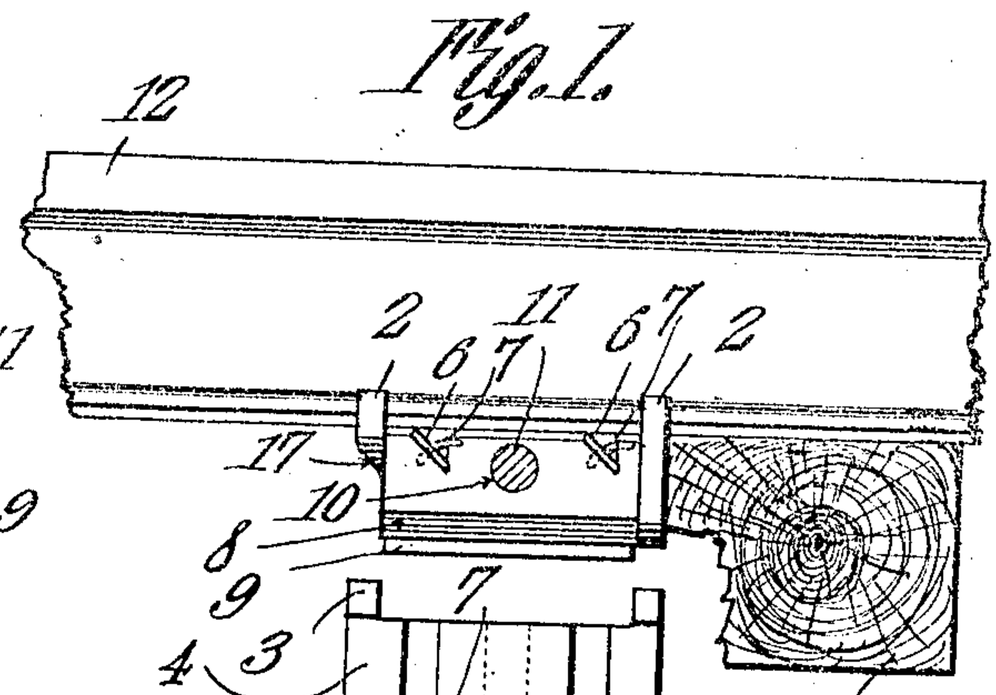


Fig. 2.

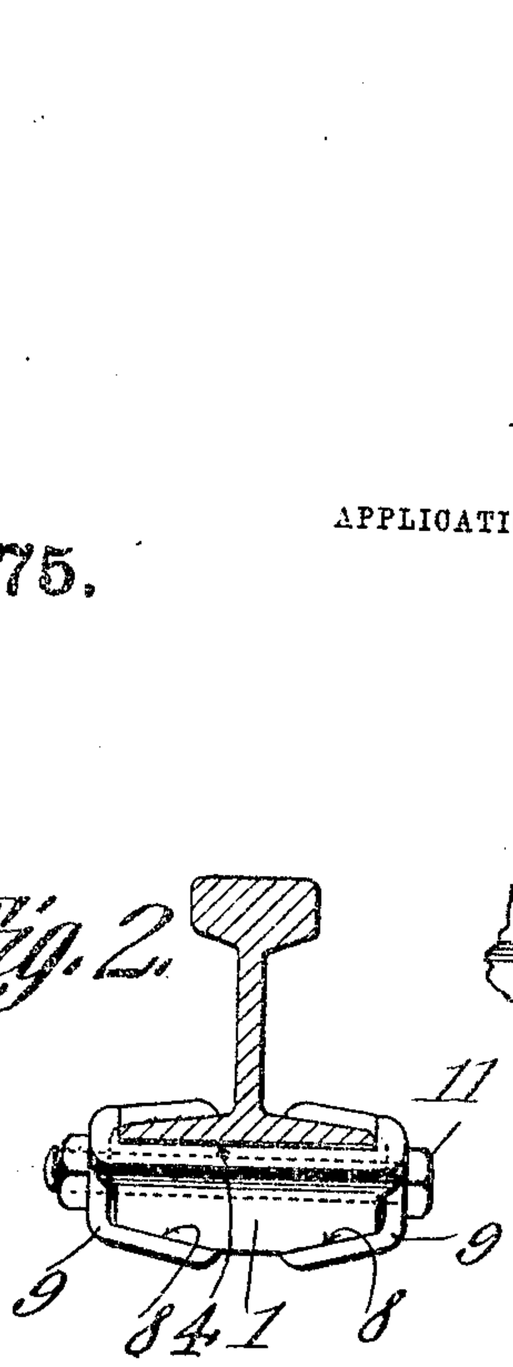


Fig. 3.

Fig. 4.

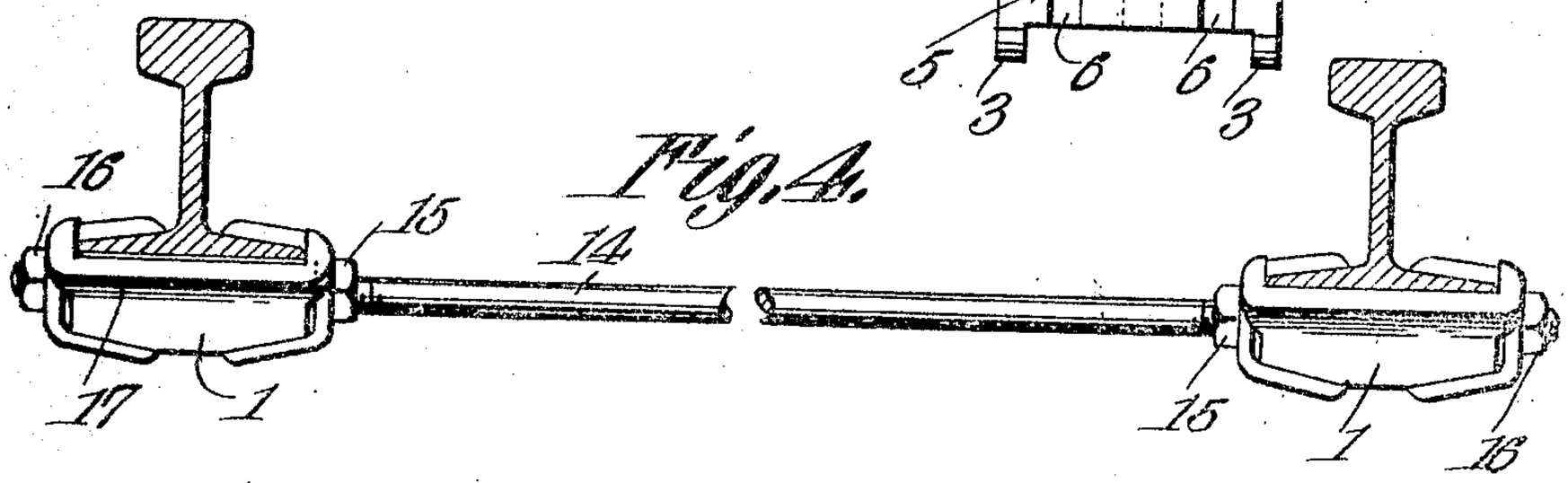


Fig. 5.

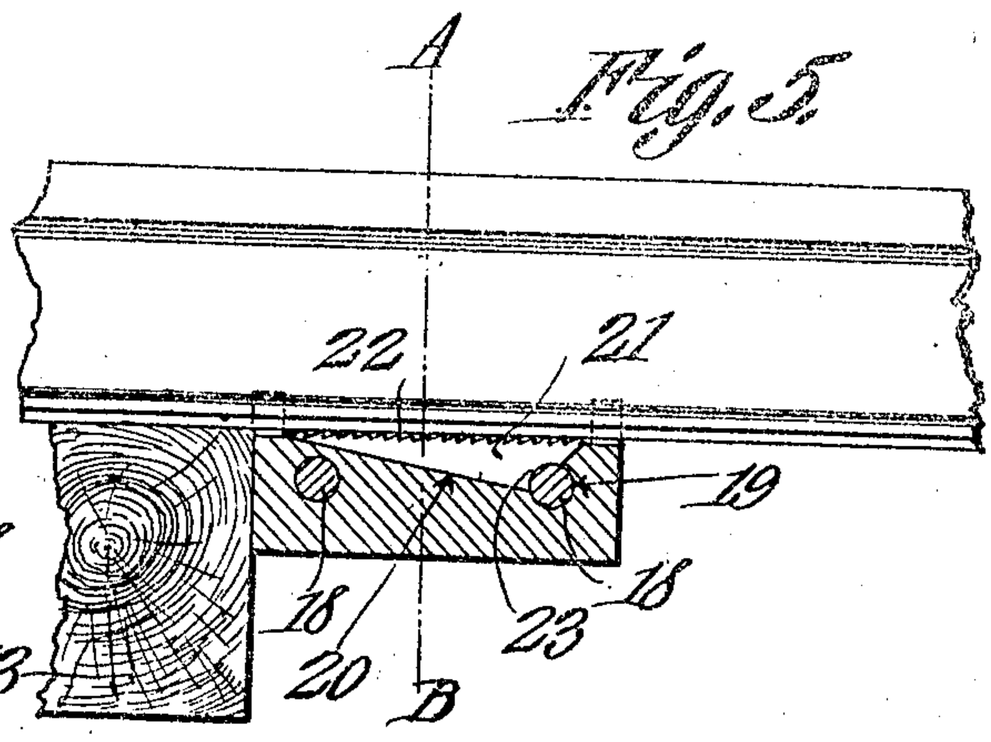
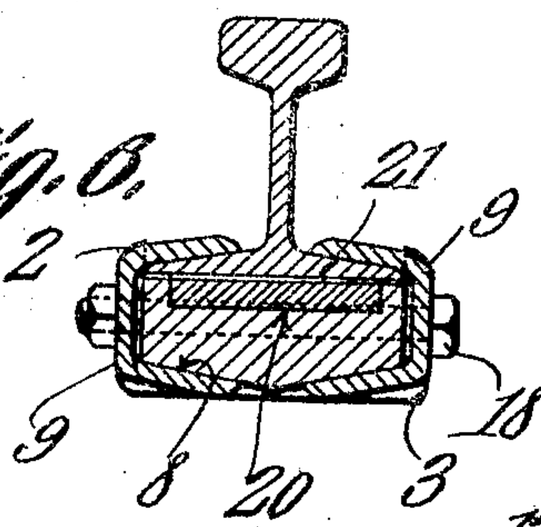


Fig. 6.



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RAIL-GRIP.

No. 916,675. Specification of Letters Patent. Patented March 30, 1909.

Application filed December 18, 1908. Serial No. 468,217.

To all whom it may concern:

Be it known that I, AUGUST CORTS, a citizen of the United States, residing at Wyncote, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Rail-Grip, of which the following is a specification.

The objects of the invention are, generally, the provision, in a merchantable form, of a device of the above mentioned class which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically the provision of a body member of novel and improved construction, of means for clamping the body member to a rail, and of novel means whereby the said body member may be caused to grip the lower surface of a rail flange; other and further objects being made manifest as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts, hereinafter described, delineated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that divers changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings:—Figure 1 shows my invention in side elevation mounted upon a rail, one of the clips being removed in order to reveal the structure of the device; Fig. 2 shows my invention in end elevation; Fig. 3 is a top plan of the body member; Fig. 4 shows in end elevation a pair of the devices of my invention united by a tie rod; Fig. 5 is a side elevation of my invention showing the same equipped with a different form of gripping means from that shown in the preceding figures; Fig. 6 is a vertical transverse section taken upon the line A—B of Fig. 5.

In carrying out my invention I provide a body member 1 carrying at its ends flanges 3 arranged to extend outward beyond its periphery. The central portion of these flanges 3 is cut away to the plane of the upper face 4 of the body member, leaving upstanding at the four corners of the said body member lugs 2. The face 4 of the body member is provided with transversely disposed notches 5, each, in their preferred form, having a straight wall disposed normally to the plane of the face 4, and an inclined wall disposed at an acute angle to the upright one. I further provide blades 6 arranged to be pivoted at the bottom of the notches 5 and being provided with a sharpened upper edge. Intermediate their ends the blades 6 are apertured to receive a retaining member 7 having its terminals mounted on the body member 1, whereby the said blades 6 may be secured to the body member.

Referring to Fig. 1 wherein the retaining members 7 are shown in elevation, it will be seen that they are slightly arcuate in form and are disposed transversely of the notches 5, their ends being inserted in the walls of the body member upon either side of the notches 5. The curved form of the retaining members 7 permits the blades 6 to have movement in the direction of the length of the rail, the said retaining members at the same time securing the said blades to the body of the device.

Referring now particularly to Fig. 2, it will be seen that the body member 1 is provided with oppositely inclined, upwardly sloping lower faces 8 arranged to receive the lower terminals of the U-shaped clips 9, the upper terminals of which extend inward over the upper face 4 of the body member and engage the rail base. These U-shaped slips 9 are arranged to substantially fill the space between the flanges 3, in order that the said clips may have no lateral movement upon the body member 1. The body member 1 is provided with an aperture 10 parallel to the flanges 3 and arranged to receive a bolt 11, whereby the clips 9 may be secured to the said body member.

In Fig. 5 I have shown a gripping means of a different form from that delineated in the preceding figures. In this form the body member is provided upon its upper face with an inclined longitudinally disposed channel 20 in which is slidingly mounted a wedge member 21, substantially filling the said channel and provided with a serrated upper face 22. The shape of the wedge member 21 is such that as it moves in the channel 20, its serrated face 22 will always

be presented to the rail in a parallel relation, in order that the full surface of the face 22 may engage the rail.

The bolt designated by the numeral 11 in Fig. 1 is duplicated in Figs. 5 and 6 by the members 18. In order to economize material one of the apertures 19 designed to receive the bolts 18 is spaced from the end of the body member to such an extent that it communicates with the inclined channel 20, and in order to accommodate the portion of the bolt which extends into the longitudinal channel 20, I cut away a portion of the broader end of the wedge member at 21 as shown at 23.

Referring now to Figs. 1 and 2, it will be seen that when the body member 1 is placed beneath the rail, the lugs 2 will engage the sides of the rail, preventing the said body member 1 from moving transversely upon the said rail. The clips 9 are then mounted upon the body member between the flanges 2 and the bolt 11 is passed through the said clips and body member 1. When the clips 9 are drawn together their lower terminals will travel the inclined lower faces 8 drawing the blades 6 upward into contact with the rail-flange. One of the terminals of the body portion 1 should be in abutment against the tie 13, and it will be seen that when thus mounted it will be impossible for the rail 12 to "creep" or move transversely upon the tie 13. Furthermore, as the tie presses against the body member 1, the blades 6 will tend to rotate in the notches 5, bringing the sharpened upper edges of the said blades into biting contact with the flange of the rail, increasing the hold of the device thereon.

The form shown in Figs. 5 and 6 should be mounted upon the rail 12 in the same relation to the tie 13 as that pointed out heretofore in connection with the form of invention shown in Figs. 1 and 2.

It will be seen that when pressure is brought against the end of the body member 1, the wedge member will tend to ascend the assigned channel 20, bringing the serrated face 22 into contact with the flange of the rail and binding the device firmly thereto.

In order to economize material, the flange which is normally remote from the tie 13 may be cut away as shown at 17 in Figs. 1 and 4.

In Fig. 4 I have shown a pair of my rail grips spaced apart by a rod 14. This rod 14 is threaded at its terminal and provided with inner nuts 15 and outer nuts 16. The track may be brought to gage by the rotation of the nuts 15, the nuts 16 being then tightened to engage the clips 9. This arrangement is likewise applicable to the form of invention shown in Figs. 5 and 6.

When the rail grip of my invention is used upon a railroad having a plurality of tracks, the traffic upon any one track being always in the same direction, the grips may all be placed upon the same side of the tie. When, however, as is the case with a single track road there is traffic in both directions, it is advisable to locate some of the grips upon one side of the ties and other grips upon the opposite sides.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:—

1. In a device of the class described, a body member provided with flanges outstanding from its periphery; U-shaped clips arranged to be mounted between the flanges and to extend terminally within the contour of the body member; gripping means mounted upon the body member beneath the terminals of the clips and having movement in the direction of the length of the rail into gripping relation with the rail.

2. In a device of the class described, a body member having oppositely inclined, upwardly sloping lower faces; rail clamping means carried by the body member and arranged to travel its inclined lower faces; gripping means carried by the body member and having movement in the direction of the length of the rail into gripping relation with the rail.

3. In a device of the class described, a body member having oppositely inclined, upwardly sloping lower faces and being provided with flanges outstanding from its periphery; a U-shaped clip arranged to be mounted between the flanges, the lower terminal of the clip being arranged to travel the inclined lower face of the body member, and the upper terminal being disposed above the upper face of the body member; gripping means mounted upon the body member beneath the terminal of the clip and having movement in the direction of the length of the rail into gripping relation with the rail.

4. In a device of the class described, a body member having oppositely inclined, upwardly sloping lower faces and being provided with flanges outstanding from its periphery, the said flanges being centrally cut away to the plane of the upper face of the body member, to form upstanding lugs; and U-shaped, rail-engaging clips mounted between the flanges and being arranged to travel the inclined faces of the body member.

5. In a device of the class described, a body member provided with flanges outstanding from its periphery; U-shaped clips arranged to be mounted between the flanges and to extend terminally within the contour of the body member; and a wedge-shaped gripping member slidably mounted upon the upper face of the body member beneath the terminals of the clips.

6. In a device of the class described, a body member having oppositely inclined, upwardly sloping lower faces; rail-clamping

means carried by the body member and arranged to travel the inclined lower faces; and a wedge-shaped gripping member slidably mounted upon the upper face of the body member.

7. In a device of the class described, a body member having oppositely inclined, upwardly sloping lower faces and being provided with flanges outstanding from its periphery; a U-shaped clip arranged to be mounted between the flanges, the lower terminal of the clip being arranged to travel the inclined face of the body member, and the upper terminal being disposed above the upper face of the body member; and a wedge-shaped gripping member slidably mounted upon the upper face of the body member and being disposed beneath the terminal of the clip.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

AUGUST CORTS.

Witnesses:
L. M. CHEER,
FRANK S. GENTRY.